

# Manufacture of Monolithic Telescope with a Freeform Surface, Phase II

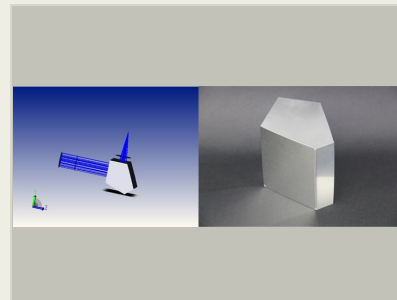
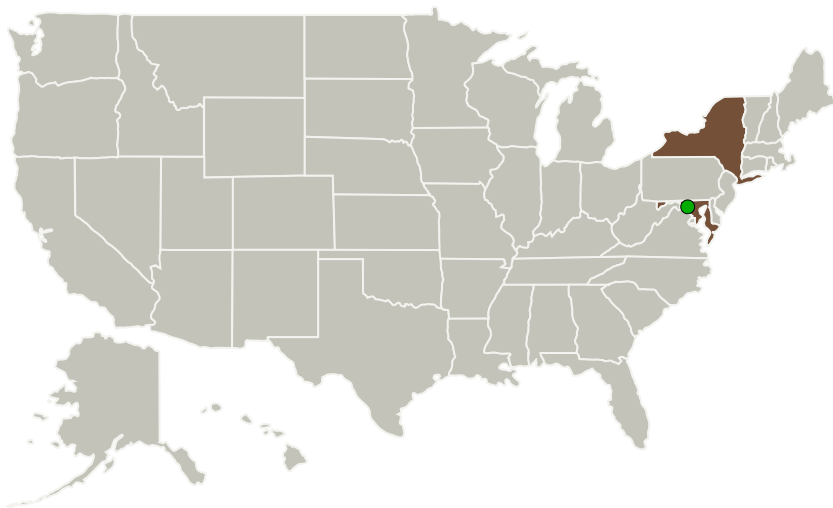
Completed Technology Project (2016 - 2018)



## Project Introduction

Monolithic freeform telescopes offer the potential to positively address the size, weight and vibration concerns associated with flight telescope systems. We propose to prove feasibility that our optics manufacturing process is capable of producing of a freeform optical telescope system by manufacturing and testing five optical surfaces on five sides of a single high purity optical material. The resulting working monolithic telescope will include a high precision freeform surface. The capability of in adding of a freeform surface in a monolithic optical telescope design offers flexibility to create more compact designs, larger fields of view, and better-performing unobscured systems.

## Primary U.S. Work Locations and Key Partners



Manufacture of Monolithic Telescope with a Freeform Surface, Phase II

## Table of Contents

|  |   |
|--|---|
| Project Introduction                         | 1 |
| Primary U.S. Work Locations and Key Partners | 1 |
| Project Transitions                          | 2 |
| Images                                       | 2 |
| Organizational Responsibility                | 2 |
| Project Management                           | 2 |
| Technology Maturity (TRL)                    | 2 |
| Technology Areas                             | 3 |
| Target Destinations                          | 3 |

| Organizations Performing Work   | Role                    | Type        | Location            |
|---|-------------------------|-------------|---------------------|
| Optimax Systems, Inc.   | Lead Organization       | Industry    | Ontario, New York   |
|  Goddard Space Flight Center(GSFC) | Supporting Organization | NASA Center | Greenbelt, Maryland |

## Primary U.S. Work Locations


|          |          |
|----------|----------|
| Maryland | New York |
|----------|----------|


# Manufacture of Monolithic Telescope with a Freeform Surface, Phase II

Completed Technology Project (2016 - 2018)



## Project Transitions

 **April 2016:** Project Start

 **July 2018:** Closed out

### Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/139630>)

## Images



### Briefing Chart Image

Manufacture of Monolithic Telescope with a Freeform Surface, Phase II

(<https://techport.nasa.gov/image/129201>)

## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Organization:

Optimax Systems, Inc.

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

### Program Director:

Jason L Kessler

### Program Manager:

Carlos Torrez

### Principal Investigator:

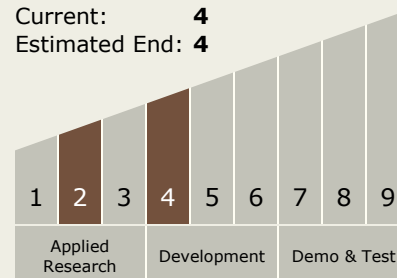
Todd Blalock

## Technology Maturity (TRL)

Start: 2

Current: 4

Estimated End: 4



# Manufacture of Monolithic Telescope with a Freeform Surface, Phase II

Completed Technology Project (2016 - 2018)



## Technology Areas

### Primary:

- TX08 Sensors and Instruments
  - └ TX08.1 Remote Sensing Instruments/Sensors
    - └ TX08.1.3 Optical Components

## Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System